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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,963	07/28/1999	YASUE SATO	35.C10695DIV	6193

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EXAMINER

GUHARAY, KARABI

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/361,963	Applicant(s) SATO ET AL.	
Examiner Karabi Guharay	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment D, filed on September 10, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

Amendment D, filed on September 10, 2002, has been entered.

Claims 16, and 17 are added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spindt et al. (US 5742117), in view of Cathey (US 5734226).

Regarding claim 9, Spindt et al. disclose an image forming apparatus comprising a first plate (14 of Fig 2) including electron emitting device (emitter 30), a second plate (faceplate 12) being disposed to face the first plate (11), a plurality of spacers (20) between the first plate and the second plate (Fig 2), the spacers being disposed

substantially in parallel with each other and extending in a longitudinal direction (see Fig 1), an outer frame ((16 of Fig 1) hermetically surrounding a space between first plate and second plate (lines 49-66 of column 4).

But Spindt et al. fail to disclose a getter being disposed first plate and second plate within the space and being proximate to a side of the outer frame (16), which is positioned across an imaginary extension of the spacers in the longitudinal direction.

However, Cathey discloses an image forming apparatus having a getter (conductive metallic wire 21 of Fig 1) disposed between first plate and second plate and proximate to a side of the outer frame (see Fig 1) which is across an imaginary extension of spacer in order to remove residual gases from the vacuum display (see lines 59 of column 2- line 3 of column 3).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a getter, as disclosed by Cathey, in the device of Spindt et al., since this will provide effective performance of the display by removing unwanted, residual gases from the vacuum chamber.

Regarding claim 10, Cathey discloses that the getter (conductive wire 21) is disposed outside a region in which the electron emitting devices are formed (see Fig 1).

Regarding claim 11, Cathey discloses the getter being disposed at the outer frame consequently, one part of the getter is positioned within a region surrounded by the imaginary extensions of two of the spacers in the longitudinal direction the two spacers being in outermost sides (since getter is arranged in the periphery of the envelope).

Regarding claim 12, Though Cathey does not teach a ring shaped getter, it is noted that applicant's specific shape of the getter does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select a getter having a ring shape.

Regarding claim 13, Spindt discloses that the region in which the electron-emitting devices are formed is an approximate rectangle (see Fig 1) and spacers are disclosed from one side to the other.

Regarding claim 14, Spindt discloses that the electron emitting devices are field emission type devices are field emission devices (see Fig 2).

Regarding claim 15, Spindt does not exemplify that the electron emitting devices are surface conduction electron emitting device. However, it is well known in the art, that there are three types of cold cathode type electron emission devices, (1) field emission type, (2) MIM type (3) surface conduction type.

It is noted that applicant's specific type of electron emitting device (in this case surface conduction type) does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select one of the above three types of electron emitting devices (see # 6160347).

Regarding claim 16, Cathey does not explicitly show that the getter is disposed on the periphery of at least one corner of the outer frame; however, Cathey teaches that

the getter can be disposed anywhere along the side of the display (lines 36-41 of column 3). Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the getter on the periphery of one corner of the outer frame following the teachings of Cathey.

Regarding claim 17, Cathey disclosed that the getter is disposed on the first plate (substrate 11, since it is positioned above the first plate).

Response to Arguments

Applicant's arguments filed on September 10, 2002 have been fully considered but they are not persuasive for following reasons:

Applicant argued that getter in Cathey is positioned parallel to an imaginary extension of spacers in the longitudinal directions not across an imaginary extension of spacers along the longitudinal direction. However, examiner respectfully disagrees. Spacers are three dimensional rectangular slab having length width and height. Spacers are extending all three directions. Applicant claimed a longitudinal direction, in this case longitudinal direction is either along the height extending from first plate to second plate, or extending along the width of the spacer, thus getter is indeed positioned across an imaginary extension of the spacer in the longitudinal direction thereof.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2879

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K.G
Karabi Guharay
Patent Examiner
Art Unit 2879


Nimeshkumar D. Patel
Primary Examiner